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NEW BIRDS FROM THE MISHMI HILLS

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During the course of study of a collection of birds from the Mishmi Hills, northern Lakhimpur District and Sadiya Frontier Tract, Northeastern Assam, I have had occasion to diagnose certain species and subspecies as being heretofore undescribed. The description of these forms follows below. The complete list of the collection, including all species noted from this little-known area of Northeastern India, will be prepared and published jointly in the Journal of the Bombay History Society by my companion on part of this trip, Mr. Salim Ali, and myself.

In the descriptions below, where colors are of critical importance, they are derived from Ridgway (Nomenclature of Colors, 1886).

Streptopelia chinensis edwardi subsp. nov.

Type.--3 ad. (U.S.N.M. No. 390144), collected December 22, 1946, by Edward C. Migdalski at Chabua, Lakhimpur District, N.E. Assam.

Diagnosis.—from suratensis of India this race differs by being conspicuously darker in tone of plunage on the back, rump, upper tail coverts and upper surface of the rectrices. The terminal bars on the feathers of the back and median wing coverts are darker buff in tone and much reduced in extent. There is a tendency towards larger size in this race, nine males and females measuring; wing 141-150.5; tail 139-145; culmen 16.5-19; as against slightly smaller measurements for north Indian birds; wing 135-148; tail 133-142; culmen—up to 16.5. However, Assam specimens of suratensis are as large as edwardi.

From tigrina this race differs by being darker on the back, rump, upper tail coverts and upper surface of the tail. In tigrina the rufous terminal bars on the upper surface tend to disappear, merging into the color of the feathers themselves, so as to present the appearance of a pale edging to each feather.

Range.-Lakhimpur District, northeast Assam, both north and south of the Brahmaputra and Lohit Rivers.

Remarks.—Stuart Baker (Fauna Brit. Ind., Birds, V, 1928, p. 243), remarks that Cachar and Manipur birds are intermediate between suratensis and tigrina. This is not entirely true in the case of these northeastern Assam birds, for they have a fuscous tone on the upperparts which is different from either race. Cachar birds, however, partake of the same basal brownish color as Indian suratensis with which I unite them. It gives me great pleasure to name this race after Mr.

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Migdalski who accompanied me on the Smithsonian-Yale Expedition, and who spared no pains in pursuit of this species.

The type specimen is in breeding condition and measures; wing 148; tail 146; culmen 17. Soft parts; iris pinkish-purple; feet pinkish-purple.

Athene brama ultra subsp. nov.

Type.--3 ad. (U.S.N.M. No. 390159), collected Dec. 21, 1946, by S. Dillon Ripley at Chabua, Lakhimpur district, N.E. Assam.

Diagnosis.—This race differs from *indica* by somewhat larger size and darker coloration. On the upper parts, particularly the center of the back, the amount of white spotting characteristic of the species is very considerably reduced. From *brama* this race differs by larger size and reduced spotting on the back.

From *pulchra* this race can be distinguished by larger size, slightly paler coloration, and by reduced spotting on the back. From *mayri* of northern and eastern Siam, *ultra* apparently differs by larger size, slightly paler coloration and by reduced spotting on the back.

| | | | culmen (from |
|---------------------------|--------------------------|-------------|---------------|
| Measurements | wing | tail | cere) |
| ultra 2 8 8 Chabua | 164.5, 167 | 83, 92.5 | 15, 15.5 |
| indica 6 3 3 Nepal, C. P. | | | |
| Punjab | $152.5 \cdot 164(158.3)$ | 74-81(76.7) | 14(5) |
| '' 13 ♀♀ '' | $154 \cdot 165.5(160.4)$ | 67-86(78.5) | 13-14.5(13.8) |

Range.—Lakhimpur district, N.E. Assam, north and south of the Brahmaputra and Lohit Rivers.

Remarks.—Birds collected recently by Walter Koelz in the Central Provinces approach brama in size and color. Mayr (Ibis, 1938, p. 313), and Deignan (Bull. 168, U.S.N.M., 1945, p. 181), give measurements of pulchra and mayri. Wing measurements of pulchra run from 138-152 mm., of mayri from 152-163 mm.

Megalaima virens mayri subsp. nov.

Type.-- 3 ad. (U.S.N.M. No. 390200), collected Jan. 6, 1947, by E. C. Migdalski at Dreyi, Mishmi Hills, N.E. Assam.

Diagnosis.—From Megalaima virens magnifica of Assam, this form differs by being very noticably darker both above and below. It is apparently somewhat larger also, with a greater amount of black on the culmen. From M.v.clamator of N. Burma, this race differs by having yellow-tipped nape feathers, and by being somewhat less richly colored on the lower surface. In size it appears to be identical with that race.

Measurements of type.-Wing 147.5, tail 100, culmen 45.

Range .--- Mishmi Hills, N.E. Assam.

Remarks.—I should have been reluctant to describe this race from a single specimen which happens to be intermediate in character between magnifica and clamator. I would have included it in the latter race, which it resembles very closely, had it not been for the fact that this type as well as other specimens noted in the field all have the yellow pointed feathers on the nape, an important and distinctive pattern which clamator lacks. This race is named for my friend and preceptor, Ernst Mayr, who first pointed out the differences between the neighboring Assam and Burma populations.

Pycnonotus striatus arctus subsp. nov.

Type.--ad. & (U.S.N.M. No. 390402) collected January 2, 1947, by S. Dillon Ripley at Dreyi, Mishmi Hills, N.E. Assam.

Diagnosis.—From striatus this race differs by having darker more pronounced tips to the feathers of the crown as well as darker shading on the webs of the crest feathers. The white shaft streaks on the crown and back tend to be slightly narrower and margined on the back with darker olive green. The blackish shading on the tail is more intense and heavier. Below the blackish shading on the breast feathers is heavier and carried farther down onto the abdomen. In bill size also, sexed birds of this race tend to be larger than striatus.

From paulus this race differs by larger size and darker coloration.

| Measurements | wing | culmen |
|--------------------|-------------------|-----------|
| Туре б | 117.5 | 19 |
| Mishmi Hills 88 | 110-118 | 19 - 21.5 |
| Q Q | 109-114 | 18.5 - 20 |
| Nepal 88 | 107-114 | 18 - 18.5 |
| - <u></u> ♀ ♀ | $104.5 \cdot 107$ | 17 - 17.5 |
| Yunnan (paulus) 33 | $105 \cdot 110$ | |
| φç | 103-108 | |

Range.—Northeastern Assam in the Mishmi Hills and the adjacent areas of Northern Burma. *P.s.striatus* occurs in the Himalyas from Nepal to Bhutan, to Cachar in Assam and to the Chin Hills (Mt. Victoria).

Pomatorhinus montanus salimalii subsp. nov.

Type.--ad. & (U.S.N.M. No. 390314) collected Jan. 13, 1947, by S. Dillon Ripley at Tezu, Mishmi Hills, N.E. Assam.

Diagnosis.—From *schisticeps* this race differs by having the slaty cap replaced by deep blackish-slate and the ear coverts are dark rich black rather than the smokey black tone of the former race. The rest of the upper parts are slightly darker.

From *cryptanthus* of Dibrugarh and Margherita this race differs by being darker more blackish on the upper parts and with a distinct blackish cap. In *cryptanthus* the cap is not clearly demarcated from the back and partakes of its brownish tone, although not as rufescent in tone as the back. The wing coverts and the edges of the wing feathers are darker also in *salimalii* than in *cryptanthus*. From *mearsi* this race differs by being darker and smaller.

In size this race seems to be intermediate between *schisticeps* and *eryptanthus*:

| | | wing | culmen |
|-------------------------|----------------|----------------|-------------------|
| schisticeps Nepal | l, ∂ ♀ | 95 - 105(99.2) | 28.5 - 31.5(30.3) |
| Darjeeling. | | | |
| salimalii, Mishmi Hills | 88 | 94.5, 97 | 31, 33 |
| cryptanthus Dibrugargh, | 2 & | 92-96(93.5) | 30.5 - 34(32.2) |
| Margherita | | | |

I have examined thirty fresh specimens of this species and would define the ranges of these races as follows:

1. Pomatorhinus montanus schisticeps

Range.--Nepal, Sikkim, Buxar Duars, Bhutan Duars, Mikir Hills, Cachar, and across Assam to Tamanthi on the central Chindwin (see Mayr, Ibis, 1938, p. 286. spcc. examined).

2. P. m. cryptanthus

Range.-North Lakhimpur Division of Assam from Dibrugarh to Margherita.

3. P. m. salimalii

Range .--- Mishmi Hills.

4. P. m. mearsi

Range.-Western Burma on the lower Chindwin (Taungdwin, Wabobin,) Chin Hills and Arakan.

This race is named in honor of Mr. Salim Ali.

Garrulax moniliger badius subsp. nov.

Type: ad. 3 (U.S.N.M. No. 390319), collected Jan. 11, 1947, by S. Dillon Ripley at Tezu, Mishmi Hills, N. E. Assam.

Diagnosis: From *moniliger* this race differs by being darker, more saturated with rich rufous particularly on the nuchal collar and on the underparts. However, the whole tone of the plumage of these birds is affected by the rufous cast. The white on the ear coverts is much reduced.

Range: Lakhimpur Division of northern Assam in the region of Margherita and across the Lohit River in the Mishmi Hills.

Remarks: Stresemann (Mitt. Zool. Mus. Berlin, 1940, 24, p. 210) mentions that a Margherita specimen taken by Stevens is very rufescent. This is corroborated by the above type, and another male from the Mishmi Hills, and by specimens from Margherita in the American Museum of Natural History collection. Birds from the upper Chindwin particularly, and to a lesser extent from northern Burma, show a cline towards this coloration, but they are really closer to moniliger.

Stuart Baker's description of moniliger in the "Fauna" (1922, p. 152), when discussing differences between *fuscata* and the typical race, reads as if moniliger had a reduced amount of white on the ear coverts. Typical moniliger from Nepal, possibly not available to him, has considerable white on the ear coverts, and in fact I do not see that the race *fuscata* is a valid one. The color of the tips of the tail feathers seems to vary from white to buffy-white partly according to the age of the feathers or of the specimeus in a collection. It is an uncertain character. However, the reduction of the white area on the ear coverts does occur in Cachar birds (which Baker lumped in moniliger), and in badius. There is some variation in the amount of white in Cachar birds, however, and so I would not suggest resurrecting maclellandii Blyth.

Garrulax erythrocephalus imprudens subsp. nov.

Type: 2 ad. (Collector's No. 328) collected Jan. 6, 1947 near the Tidding Saddle above Dreyi, Mishmi Hills, N. E. Assam by S. Dillon Ripley.

Diagnosis: From *nigrimentum* of Sikkim and Bhutan (see Kinnear's note, Ibis, 1937, p. 32) this race differs by being darker brown on the upper back and darker olive-brown below with somewhat heavier black subterminal barring on the throat and breast and more fulvous-whitish

bloom on the nape, sides of lower throat and breast. This color fades with age, and in fact foxed specimens of *nigrimentum* tend to assume the reddish-brown tone of *imprudens*. In this race the tail and wings are colored orange-golden rather than yellow-golden as in *nigrimentum*. The lower abdomen is washed with bistre rather than tawny-olive.

Measurements: Wing 101.5, tail 107, culmen 21.5.

Range: Miri, Dafla and Mishmi Hills, N. E. Assam.

Remarks: Birds in the British Museum collection from the Miri and Dafla Hills and a specimen from Nyuksang, lower Brahmaputra, collected by Capt. F. M. Bailey, agree with this single Mishmi specimen. As a result I have decided to name this race on the basis of these several specimens although it has the same basic color pattern as *nigrimentum*, and differs from that race primarily in degree. This race differs from erythrocephalus to the west, and from godwini, chrysopterum and erythrolaema to the south as does *nigrimentum*; see Stuart Baker's key (Fauna Brit. Ind. Birds, I, 1922, p. 163).

Leiothrix argentauris gertrudis subsp. nov.

Type: ad. & (U.S.N.M. No. 390393), collected December 25, 1946, by S. Dillon Ripley at Dening, Mishmi Hills, N. E. Assam.

Diagnosis: From *argentauris* this race differs by having more of a yellowish, less of an orange wash on the nape, and by being more olivegreenish on the back, less grayish. On the underparts the throat is less tinted with reddish, and the abdomen and flanks are more olivaceous. From *vernayi* this race differs by larger size. In color it is virtually similar although somewhat more olivaceous on the lower parts.

| | Measurements: | wing | tail | culmen |
|--------------|---------------|-----------|----------|--------|
| Mishmi Hills | ð ð | 75, 79 | 65, 66.5 | 15(2) |
| | ę | 74.5 | 62 | 14.5 |
| N. Burma | \$ \$ | 74.5, 79 | 69,70 | 14, 15 |
| | \$ \$ | 71 - 74.5 | 64-68 | 14-15 |

Range: Assam in the Mishmi Hills and extreme N. Burma in the Myitkina and Laukkaung subdivision.

Remarks: Mayr (Ibis, 1941, p. 98) identifies these N. Burma specimens as *argentauris*, but notes their resemblauce to *vernayi* in color. These Mishmi specimens plus fresh *argentauris* from Nepal confirm that these color differences really exist.

It gives me great pleasure to name this race of this delightful bird after one of my friends and companions in the field, Mrs. Sidney Legendre.

Spelaeornis badeigularis spec. nov.

Type: ad. 9 (U.S.N.M. No. 390355), collected January 5, 1947, by S. Dillon Ripley at Dreyi, Mishmi Hills, N. E. Assam.

Description: Above bistre, each feather with a dark area in the center bordering the shaft approaching clove brown in tone; tail seal-brown. Wing feathers chocolate on the outer, and seal-brown on the inner webs. The throat is chestnut, each feather with a narrow sepia colored center. The breast feathers are bistre with a black terminal and a white subterminal bar. The feathers of the abdomen are more grayish than the breast, the white subterminal bars are enlarged, and the black terminal bars are much reduced. Along the shaft of these breast feathers runs a narrow white stripe margined on the external side of the web with black.

Measurements: Wing 48; tail 31; culmen 11.5.

Seft parts: Iris brown; bill black; legs brown.

Range: Mishmi Hills, N. E. Assam.

Remarks: From Spelaeornis caudatus of Darjeeling, Sikkim and Bhutan, this species differs in the darker color of the upperparts and in the color and pattern of the underparts. In caudatus the lower surface except for the center of the abdomen is predominantly cinnamon-rufous. In badeigularis the chin is white, the throat is dark chestnut with dark striae and the rest of the underparts are bistre or dark olive-gray. It also has shorter tail coverts.

From Spelacornis longicaudatus this species differs by having a proportionately shorter tail, a chestnut throat, and a bold pattern of barring on the abdomen and belly and striae on the throat. In general appearance, except for the chestnut throat, badeigularis is nearest to longicaudatus kinneari from northern Tonkin.

Comparative Measurements:

| | | | | wing-tail | |
|--------------|-----|-----------|---------|-----------|------------|
| | | wing | tail | index | culmen |
| caudatus | δ | 47 | 32 | 68% | 11.5 |
| | φ φ | 46.5 - 49 | 27 - 33 | 57-67% | 11-12 |
| badeigularis | Ŷ | 48 | 31 | 65.6% | 11.5 |
| l. kinneari | 88 | 50(2) | 39, 43 | 78,86% | 12.5, 13.5 |
| | Ŷ | 52 | 38 | 73% | 13 |

Mayr (Ibis, 1941, p. 71) has clearly pointed out the problems in the neighboring species of *Alcippe*. He remarks that within the species *morrosinia* there seems to be a gliding range of proportions between the forms. The same seems to be true for the species *nipalensis*. I therefore, propose:

Alcippe nipalensis commoda subsp. nov.

Type: 3 ad. (U.S.N.M. No. 390348), collected December 29, 1946 by S. Dillon Ripley at Dening, Mishmi Hills, N. E. Assam.

Description: From *nipalensis* this race differs by being more richly colored on the back, more rufous-brownish rather than olive. The gray erown is darker gray. Below there is more of a buffy wash on the underparts. In proportion it differs by having the tail shorter than the wing. The wing-tail index varies from 89-98%, whereas in *nipalensis* the wing-tail index runs from 98-106%. From *stanfordi*, this race differs by being darker, as the Arakan race is even paler than *nipalensis*.

| Measurements: | wing | tail | w-t index | culmen |
|--------------------------------|---------|-----------|-----------|-----------------|
| (males and females) commoda | | | | |
| Mishmi Hills | 57-61 | 55-59 | 94- 98% | 12 - 13.5 |
| Margherita | 57-60 | 54-55.5 | 90-92% | 12(3) |
| Cachar | 57-60.5 | 52.5-57 | 89-94% | 12-13.5 |
| N. Burma | 56-60 | 51-55 | 90- 96% | $12 \cdot 12.5$ |
| nipalensis | | | | |
| Sikkim | 58-60.5 | 57-60 | 98-100% | 12 - 13.5 |
| Nepal | 57-63 | 58.5-63.5 | 99-106% | 12 - 13.5 |

Range: Assam in Cachar, North Lakhimpur and the Mishmi Hills, Burma in the upper Chindwin and Myitkina areas.

Xiphirhynchus superciliaris intextus subsp. nov.

Type: 9 ad. (Collector's No. 325), collected Jan. 6, 1947 by S. Dillon Ripley at Dreyi, Mishmi Hills, N. E. Assam.

Diagnosis: From *superciliaris* this race differs by having a darker erown and lighter upperparts, and a paler throat and paler, more tawnyolive underparts. From *forresti* of north Burma and Yunnan, this race differs by having the underparts more richly colored, tawny-olive rather than einnamon.

| Measurements: | wing | tail | culmen |
|------------------------|------|------|--------|
| Q (type), Mishmi Hills | 77 | 84 | 55 |
| o, Manipur | 81 | 90 | 53 |

Range: Mishmi Hills and Manipur.

Remarks: This race is exactly intermediate in color between *superciliaris* and *forresti*, and I should have hesitated to name it, especially on a single specimen if I had not had an opportunity this summer of looking at the material in the British Museum. This specimen agrees well with the Godwin-Austen skin from Manipur noted as "unusual" by Kinnear (Ibis, 1937, p. 35), showing that there is a population interposed between the Sikkim and Burma populations which exhibits a well-marked discontinuous cline in color characters. It is notable that this species exhibits a reversal of the usual trend from paler color in the more westerly Himalayas to darker color farther east. Specimens of this race should eventually be collected in the intervening Naga Hills.

Actinodura egertoni lewisi subsp. nov.

Type: 3 ad. (U.S.N.M. No. 390299), collected Jan. 4, 1947 by S. Dillon Ripley at Dreyi, Mishmi Hills, N. E. Assam.

Diagnosis: From *egertoni* this race differs by having pronounced dark edgings on a very gray head, by having more dark gray wash on the neck and by having a darker back and a tendency to broader striping on the tertiaries. Nepal and Sikkim birds lack the distinctive edging to the crown feathers and have a reduced wash of gray on the throat, nape and breast.

From *khasiana* this race differs by being darker and by not having the pronounced barring on the central tail feathers. From *ripponi* it differs by being much darker, more rufous-brownish on the back and more rufous on the tail.

The type measures: Wing 88, tail 110, culmen 16.5.

Range: Mishmi Hills, N. E. Assam.

This race is named in honor of Wilmarth S. Lewis who has graciously encouraged and assisted the author on numerous occasions.

Orthotomus sutorius luteus subsp. nov.

Type: 3 ad. (U.S.N.M. No. 390559), collected January 10, 1947 by S. Dillon Ripley at Tezu, Mishmi Hills, N. E. Assam.

Diagnosis: This race differs from *patia* by being more rufous on the forehead and darker on the crown and nape. Below *luteus* is washed with rufous-buff, a stronger richer color than in *patia*. In the same way

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this race differs from *longicaudatus* although the nape of that race is as dark as in these Mishmi birds. The type measures; wing 45.5, tail 50, culmen 14.

Range; Mishmi Hills and Margherita, north Lakhimpur district, N. E. Assam.

Remarks: Four birds from Margherita in the American Museum Collection agree with my four Mishmi birds in the strong rufous-buff wash on the underparts. They are not quite as dark on the crown and nape, but close enough for me to include them in this race.

Seicercus xanthoschistos pulla subsp. nov.

Type: 2 ad. (U.S.N.M. No. 390565), collected Dec. 30, 1946 by S. Dillon Ripley at Dening, Mishmi Hills, N. E. Assam.

Diagnosis: from xanthoschistos of Nepal and Sikkim this race differs by being darker, slaty on the crown and mantle and somewhat more washed with olive on the flanks. Nepal and Sikkim specimens are paler above, more slaty-gray with a gray coronal streak, while in *pulla* these tones are equally and proportionately darker. The wing and tail feathers are darker in *pulla*, more blackish in tone, but old skins fade badly. There is no appreciable difference in size.

Range: Northern Assam in Cachar, the Khasia Hills, and Lakhimpur, the Chin Hills and northern Burma.

Remarks: The name *jerdoni* was used for Sikkim specimens which are similar to Nepal birds, when fresh examples are compared.

Aethopyga nipalensis koelzi subsp. nov.

Type: 3 ad. (U.S.N.M. No. 390621), collected Jan. 7, 1947 by S. Dillon Ripley on the Dening-Dreyi trail, Mishmi Hills, N. E. Assam.

Diagnosis: From *nipalensis* of Nepal this race differs by longer bill. Eleven males and four females of *nipalensis* from Central Nepal measure; wing 351-58(53.5), 948.5-50(49.2), culmen 317.5-19(17.9), 916.5-18; while six males and two females from the Mishmi Hills measure: wing 354.5-57(55.8), 950, 52, culmen 322-24(22.5) 920, 21. In color there is no distinctive difference, consequently this race differs from victoriae as does *nipalensis*.

Range: Sikkim, Bhutan, Mishmi Hills, northern Burma and Yunnan.

Remarks: Sikkim birds have somewhat shorter culmens approaching *nipalensis* in a cline, but I have not examined any males with a culmen measurement shorter than 21, so feel it best to include them in *koelzi*. This race is named for Dr. Walter Koelz who has been making such splendid collections of Indian birds.

Passer montanus hepaticus subsp. nov.

Type: 3 ad. (U.S.N.M. No. 390602), collected Jan. 11, 1947 by S. Dillon Ripley at Tezu, Mishmi Hills, N. E. Assam.

Diagnosis; This race differs from *malaccensis* of India and Malaya by being very much darker on the upper and lower parts. The head is purplish brown in color, almost liver-colored and the back, rump and the borders of the wing feathers are dark rich brown, the wing margins being rather rufous. Below this race has a distinct brownish wash on the gray of the under parts. Two specimens of the series have an infusion of purplish-brown at the lower margine of the black throat patch. From *tibetanus* this race differs by darker color and smaller size. It is in fact the most saturated of any race of the Tree-Sparrow examined by me.

| Measuren | nents: | wing | tail | culmen |
|----------|--------|-------|-------|----------|
| 5 | 88 | 68-71 | 50-54 | 11, 5-12 |

Range: Mishmi Hills from 500-2, 500 feet altitude and North Lakhimpur (Chabua). Northeast Assam. Stuart Baker (B.B.O.C., XLV, 1925, p. 93) records a specimen of *tibetanus* from the Abor Hills, and it is possible that that race occurs in the Mishmis above 10,000 feet.